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13. ABSTRACT (Maximum 206 words) TRICARE IS AN INITIATIVE CREATED TO INTEGRATE MANAGED CARE CONCEPTS INTO THE MHSS. TRICARE INTRODUCES THE MHSS TO MANAGED CARE BY ESTABLISHING THREE DIFFERENT HEALTH CARE OPTIONS. THE THREE OPTIONS ARE PRIME, EXTRA, AND STANDARD. ONLY PRIME REQUIRES ENROLLMENT. PRIME CAN BE FURTHER BROKEN DOWN INTO DIRECT AND NETWORK. TO BE SUCCESSFUL IN CONTAINING COSTS, TRICARE MUST ENROLL THE OPTIMAL NUMBER OF BENEFICIARIES IN PRIME DIRECT. THE LEAD AGENT, WITH BOTH THE MTF COMMANDERS AND CONTRACTOR ARE HEAVILY MARKETING THE PRIME DIRECT OPTION. PRESENTLY, REGION 10 HAS NO METHOD OF PREDICTING WHO WILL ENROLL IN PRIME DIRECT. THE PURPOSE OF THIS STUDY WAS TO DEVELOP A LINEAR MODEL THAT PREDICTS PENETRATION RATES OF PRIME ENROLLMENT FOR DIFFERENT DEMOGRAPHIC POPULATIONS. THE RESULTS INDICATE THAT SOCIO-DEMOGRAPHIC CHARACTERISTICS DO INFLUENCE A BENEFICIARY'S DECISION TO ENROLL IN PRIME. THE EVIDENCE ALSO SUPPORTS THAT ONCE A BENEFICIARY HAS DECIDED TO ENROLL, HE OR SHE IS THEN INFLUENCED BY SOCIO-DEMOGRAPHIC CHARACTERISTICS WHEN CHOOSING A PRIMARY CARE MANAGER. ALTHOUGH THE RESULTS CAN ONLY BE GENERALIZED FOR REGION 10, THEY DO INDICATE THAT THE LEAD AGENT, CONTRACTOR, AND MTF COMMANDERS NEED TO REDIRECT THE MARKETING EFFORT TOWARD THE SERVICE LINE CUSTOMER.				
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PREDICTORS OF ENROLLMENT IN TRICARE PRIME DIRECT  
IN DoD TRICARE REGION 10

A GRADUATE MANAGEMENT PROJECT SUBMITTED TO  
THE FACULTY OF THE U.S. ARMY-BAYLOR GRADUATE PROGRAM  
IN CANDIDACY FOR THE DEGREE OF  
MASTERS IN HEALTHCARE ADMINISTRATION

BY

LT JONATHAN E. COPLEY, USCG

FT. SAM HOUSTON, TEXAS

APRIL 1996

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## ABSTRACT

TRICARE is a new initiative created to integrate managed care concepts into the MHSS. TRICARE introduces the MHSS to managed care by establishing three different health care options. The three health care options offered under TRICARE are Prime, Extra, and Standard. The only option that requires enrollment is Prime. Prime can be further divided into Direct and Network. Prime Direct is equivalent to a staff model HMO and Network a network model HMO.

To be successful in containing costs, TRICARE must enroll the optimal number of beneficiaries in Prime. The Lead Agent, along with both the TRICARE Support Contractor and the regional MTFs are heavily marketing the Prime Direct option. Presently, Region 10 has no method of predicting who will enroll in Prime Direct.

The purpose of this study was to develop a linear model that predicts penetration rates of Prime enrollment for different demographic populations. The study also evaluated the effectiveness of different MTF enrollment policies. The results indicate that socio-demographic characteristics do influence a beneficiary's decision whether to enroll in Prime or not to re-enroll in Prime. The evidence also supports that once a beneficiary has decided to enroll in Prime, he or she is then influenced by socio-demographic characteristics when choosing a primary care manager. In addition, comparing the effectiveness of different enrollment policies indicates that a statistically significant difference does exist between MTF enrollment rates.

Although the results can only be generalized for Region 10, they do indicate that the Lead Agent, TCS contractor, and MTF commanders need to redirect the marketing effort toward the service line customer. The developed linear models, used in conjunction with utilization and capacity reports, will help the Lead Agent and MTF commanders formulate a more effective marketing strategy for enrolling new members.

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## INTRODUCTION

The U.S. healthcare industry is presently undergoing several changes. The healthcare industry is experiencing a shift from specialty providers to generalists, from inpatient care to outpatient care, and from traditional indemnity insurance to prepaid health plans. The Military Health Services System (MHSS) is undergoing similar reforms, the most notable of these reforms is the development of TRICARE.

TRICARE is a new initiative created to integrate managed care concepts into the MHSS as established in President Clinton's Healthcare Security Act of 1994.<sup>1</sup> The purpose for converting the MHSS to a managed care environment is to provide quality care while improving access and containing costs (Star 1993). This initiative toward managed care in the MHSS has evolved over several years. The Fiscal Year 1988 Defense Authorization Act (Public Law 100-180) initiated this effort by mandating demonstration projects be implemented to improve quality and

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<sup>1</sup> President Clinton proposed using Alain Enthoven's "managed competition" to reform the U.S. healthcare system by dividing the United States into different healthcare regions (Inglehart 1208, 1993).

contain costs in the MHSS (RAND 1989). These projects included the Civilian Health and Medical Program of the Uniformed Services (CHAMPUS) Reform Initiative in Hawaii and California (CRI), Catchment Area Management Demonstration Projects, and the U.S. Army's "Gateway to Care" program implemented in 1991.

All of these initiatives were developed to: contain the rapidly rising healthcare costs for CHAMPUS, maintain or improve the quality and accessibility of patient care, and improve both beneficiary and MTF staff satisfaction (RAND 1990). However, under some of the demonstration projects, specifically CRI, costs actually increased 4.6 percent from 1988 to 1989 (Hosek 1990).

The Assistant Secretary of Defense for Health Affairs addressed the projects' shortcomings by developing TRICARE. TRICARE itself is a culmination of the strong points of these different managed care projects (Region 10 Health Services Plan 1994).

TRICARE divides the MHSS into 12 regions encompassing the continental United States and Hawaii, with each region being headed by a Lead Agent (Appendix 1). The Lead Agent is usually the commander of the largest medical center in

that particular region.<sup>2</sup> The Lead Agent and staff (Lead Agency) comprise a separate entity from the host military treatment facility (MTF) and administer the managed care support contract<sup>3</sup> and coordinate regional activities. The Lead Agent is responsible for implementing the tenets of TRICARE throughout the region.

TRICARE introduces the MHSS to managed care by establishing three different healthcare options. Active duty members and CHAMPUS eligible beneficiaries, which include active duty dependents, and retirees under the age of 65 and their dependents, are eligible to participate in TRICARE. The three healthcare options offered by TRICARE are Prime, Extra, and Standard. TRICARE PRIME is designed to replicate a health maintenance organization (HMO).

A HMO is defined as an organization of healthcare personnel and facilities that provides a comprehensive range of health services to an enrolled population. These health services cover the entire continuum from inpatient, outpatient, home health, ambulatory, pharmacy, and sometimes dental care. The different types of models include group, staff and network (Hartwell and Hamilton 1995, 70).

Under TRICARE PRIME, the organization is the MHHS which is comprised of the regional MTFs and military providers. The

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<sup>2</sup> The Lead Agent in Region 1 will rotate every year between Malcom Grow Medical Center (USAF), Bethesda Naval Medical Center and Walter Reed Army Medical Center.

<sup>3</sup> The managed care support contract (MCSC) supplements the capabilities of the regional military health care delivery networks. There will be seven MCSCs competitively awarded which will support the 12 regions in TRICARE. The MCSC is a fixed-priced, at-risk contract between OCHAMPUS and the TRICARE Support (TCS) Contractor (OASD(HA) TRICARE Policy Guidelines 1994).

covered population includes all active duty, active duty family members, retirees and their family members.

Basically, the MHSS is equivalent to a staff model HMO.

TRICARE Extra is similar to a preferred provider organization (PPO).

A PPO is defined as a group of physicians and/or hospitals who contract with an employer to provide services to their employees. In a PPO the patient may go to the physician of his/her choice within the PPO, or for a higher copay/deductible, the patient may go to a physician outside of the PPO (Hartwell and Hamilton 1995, 71).

Under TRICARE Extra, OCHAMPUS has contracted with the TRICARE Support Contractor to provide a network of supplemental providers which eligible beneficiaries may access for care. TRICARE Standard is equivalent to traditional indemnity insurance.

The only option that requires beneficiary enrollment is PRIME. PRIME can be further broken down into Direct and Network. PRIME Direct is equivalent to a staff model HMO while PRIME Network is structured after a network model HMO.

A network model HMO is defined as an organizational form in which the HMO contracts for medical services within a network of medical groups (Hartwell and Hamilton 1995, 70).

When a member enrolls in PRIME, he or she chooses either a military or network provider as his or her Primary Care

Manager (PCM). By enrolling and designating a PCM, the beneficiary is agreeing to have that provider manage his/her care. Therefore, the beneficiary's PCM will coordinate all of his/her medical care. PRIME Direct refers to care provided by the MTF<sup>4</sup> and offers the best opportunity to retain the beneficiary's treatment within the MHSS.<sup>5</sup> PRIME Network is provided by the contracted network of providers outside of the MHSS.

Under EXTRA, eligible beneficiaries are allowed to utilize the contracted network of providers by satisfying a deductible and copayment which is lower than if the beneficiary utilized a non-network provider. TRICARE Standard is the present CHAMPUS fee-for-service policy. Figure 1 provides the different benefits and coverage's of the three TRICARE options. The member must enroll in order to receive the benefits of the PRIME option. However, the member is not required to enroll in either the EXTRA or

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<sup>4</sup> Military Treatment Facilities (MTFs) include three main categories: clinics, community hospitals, and medical centers. In 1994, there were 18 medical centers, 99 community hospitals, and over 400 clinics in the military health services system (Lynn 1994).

<sup>5</sup>OASD(HA) Policy Guidelines establish the PCM concept within the MHSS. The guidelines state: "Primary care managers are essential elements of a successful managed care program in the MHSS. PCMs provide appropriate, cost-effective, quality care to a local enrolled population. PCMs accomplish this by: serving as enrollees access point, coordinating and integrating specialty care, and ensuring provision of services which balance the best possible outcomes for the beneficiary in the context of fiscal responsibility" (OASD(HA) Policy for Implementing TRICARE Primary Care Programs in the MHSS 1995, 26).

STANDARD option. The focus of this study was on PRIME enrollment only.

SERVICES	TRICARE PRIME		PROGRAM	TRICARE	TRICARE
	AD FAMILY MEM		RETIREEES & FAM MEMS ENROLLMENT FEE \$230/460	EXTRA	STANDARD
	E1-E4	E5 & >			
DEDUCTIBLE	NONE	NONE	NONE	\$150/PERSON per year \$300/FAMILY	\$150/PERSON \$300/FAMILY
PHYSICIAN	\$6	\$12	\$12	AD FAM MEMBER  15% OF PLAN  ALLOWABLE AFTER  DEDUCTIBLE   RETIREEES &  FAM MEMBERS  20% OF PLAN  ALLOWABLE AFTER  DEDUCT	AD FAM MEMBER  20% OF CHAMPUS  ALLOWABLE  AFTER DEDUCT   RETIREEES &  FAM MEMBERS  25% OF PLAN  ALLOWABLE  AFTER DEDUCT
SERVICES	COPAY	COPAY	COPAY		
OFFICE VISITS	VISIT	VISIT	PER VISIT		
LAB & X-RAY	\$6	\$12	\$12		
ROUTINE	NO	NO	NO		
PAP SMEARS	COPAY	COPAY	COPAY		
AMBULANCE	\$10	\$15	\$20		
SERVICES	COPAY	COPAY	COPAY		
EMERGENCY	\$10	\$30	\$30		
SERVICES	COPAY	COPAY	COPAY		

**Figure 1: TRICARE Benefits & Coverage Chart**

### Conditions Which Prompted This Study

The purpose of TRICARE is to ensure access while containing costs (TRICARE Policy Guidelines 1994). To achieve this mission, TRICARE must enroll the optimal number

of eligible beneficiaries in PRIME (Hosek et al. 1990; Lynn 1994). To ensure success, the Lead Agent, along with both the TRICARE Support (TCS) Contractor and the regional MTF's, are heavily marketing the PRIME Direct option to beneficiaries (Region 10 Marketing Plan 1995; OASD(HA) Update to Policy Guidelines 1996). Because the marketing strategy is vital to the survival of TRICARE, it is important to understand the relationship between the Lead Agent and the TCS contractor.

In the Request for Proposal (RFP) that governs the TRICARE Support Contract for Region 10, the contractor is required to establish and implement a marketing plan. The Lead Agent reviews and the contracting officer at OCHAMPUS approves the final marketing plan (RFP 1995). The plan shall include the marketing strategy, an environmental analysis, and a list of required reports such as enrollment data which will be used for surveillance of the TCS contractor's performance.

At the quarterly meeting of the Region 10 Governing Board (25 September 1995), Aetna Government Health Plans, (the present TCS contractor in Region 10), reported that PRIME enrollment was down approximately 100,000 members

(or 64%) during the open enrollment period from 01 August through 01 October 1995 from the previous years (1994) figures.<sup>6</sup> The TCS contractor asserts this is a result of the new Uniform Benefits package, which requires an enrollment fee for eligible retirees and their families.<sup>7</sup> In addition, GAO's award of the TCS contract to Foundation Health from Aetna is also affecting enrollment (Aetna briefing 1995). Aetna asserts that eligible retirees are in a "wait and see" mode hoping that the enrollment premium will drop under the new contract. Also, other eligible beneficiaries are waiting until the transition from Aetna to Foundation Health is complete so that they can avoid the potential switching of Primary Care Managers between networks. In response to this presentation, the Governing Board, comprised of Region 10 MTF commanders, requested a breakdown of enrollment metrics on the different beneficiary

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<sup>6</sup> Region 10 is somewhat unique among the other regions due to its participation in CRI from 1988 to 1994. Foundation Health Federal Services was awarded the first CRI support contract in 1988. Aetna Government Health Plans was awarded the follow-on program in July 1993. The new TRICARE contract in Region 10 was recompeted in the spring of 1994 and was awarded to Foundation Federal Health Plans. The transition from Aetna to Foundation is anticipated to be complete on or around 01 April 1996 (Region 10 RHSP 1995). As demonstration programs, both CRI and the follow-on program were able to offer the PRIME option without a copay or enrollment premium.

<sup>7</sup> OASD(HA) Policy Guidelines address the Uniform Benefits program. The Policy states: Congress mandated a uniform benefit by 31 December 1994 to provide reduced out-of-pocket costs and a benefit structure that is as uniform as possible throughout the United States. The benefit is vital for the MHSS to effectively compete for enrollees (OASD(HA) TRICARE Policy Guidelines 1996). The new uniform benefit program initiated in all regions requires a copay and enrollment premium for retirees and their family members.



groups for each facility so that they can take a leadership position in helping market TRICARE Prime.<sup>8</sup>

#### Problem Statement

Presently, TRICARE Golden Gate (Region 10) has no method of predicting who will enroll in the PRIME Direct option. This lack of predictive ability is diminishing the Lead Agent's and MTF Commander's capability to determine the resources and policies needed to implement TRICARE and to effectively market the PRIME Direct option.

#### Literature Review

The scope of the study required that five areas be addressed in the literature review. The first section explained the strategy of encouraging beneficiaries to choose PRIME Direct versus PRIME Network. The second and third sections helped identify variables and hypotheses and also helped identify possible predictors of EXTRA and Standard users. The fourth section, developing marketing strategies, supports how the information gained in this

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<sup>8</sup> OASD(HA) Policy Guidelines establish MTF Commanders responsibilities under TRICARE. The guidelines state: MTF commanders must determine their enrollment capacities with the assumption that all active duty members are considered enrolled in Prime. MTF commanders must establish a policy for assignment to MTF PCMs which follow the statutory priority of access to MTF care (i.e., active duty, active duty family members, retirees and their family members). Although beneficiaries have a choice in selection of their PCMs, MTF commanders have the final authority to determine the most appropriate selection of MTF PCMs for the beneficiary (OASD(HA) TRICARE Policy Guidelines 1996).

study is important to marketing TRICARE. The fifth section formulated the experimental design used for this study.

#### **Direct Care System Versus Network**

The population analyzed in this study are CHAMPUS eligible beneficiaries residing in Northern California (TRICARE Golden Gate-Region 10) who have enrolled in PRIME. Region 10 is comprised of four inpatient MTFs and fifteen stand-alone or attached outpatient clinics. David Grant Air Force Medical Center is the only inpatient medical center, with Lemoore Naval Hospital, Mather/McClellan Air Force Hospital, and Beale Air Force Hospital being the remainder of the inpatient MTFs. Together, these facilities serve a total beneficiary population of approximately 351,051 with 207,771 being CHAMPUS eligible (DMIS V.1.0 1994).

CHAMPUS, established in 1966, provides supplemental healthcare coverage for active duty family members, retirees and their family members under age 65 (Lynn 1994). Eligible beneficiaries who receive care from a CHAMPUS approved physician are only required to pay a standard deductible and a percentage of CHAMPUS allowable charges. CHAMPUS has developed into a significant proportion of the care received by beneficiaries. In 1992, CHAMPUS costs were approximately

\$3.5 billion while DoD costs for care received by active duty members was nearly \$3.9 billion (Lynn 1994).

The DoD responded to increasing CHAMPUS costs by initiating the already mentioned pilot managed care programs. In addition, the DoD began to compare the costs of care in the MTF to the costs of care in the civilian sector. The "Section 733 Study of the National Defense Authorization Act for Fiscal Years 1992 and 1993" addressed this issue. One of the study's objectives was to evaluate the consequences of reducing the size of the MHSS to support only the present "wartime mission" (Lynn 1994). The study reported that such a reduction would shift beneficiaries from the direct care system to CHAMPUS. The study reported that such a shift would most likely increase "total DoD healthcare costs" because MTFs "can provide care less expensively on a case-by-case basis than can CHAMPUS" (Lynn 1994).

However, the "733 Study" used 1992 and 1993 CHAMPUS costs while the new TCS contract is operating under different pricing schemes (733 Study 1993; RFP 1994). The TRICARE contract is a negotiated rate of CHAMPUS Maximum Allowable Charges (CMAC) for outpatient care and a

negotiated per diem charge for inpatient care (OASD(HA) TRICARE Policy Guidelines 1994; RFP 1994). Therefore, under TRICARE Prime, which offers beneficiaries the "choice" of either a military PCM (DIRECT) or a contracted network PCM (NETWORK), the question of which is less expensive needs to again be addressed. Once again, on a case-by-case basis, the MTF is less expensive than the contracted network (Region 10 Health Services Plan 1995).<sup>9</sup> This cost advantage associated with the direct care system helps explain the DoD's strategy to promote PRIME Direct vice Network.

#### **Studies on HMO Enrollment**

There have been numerous studies evaluating consumers enrollment decisions in HMO-type plans. These studies have identified several factors which influence a consumer's decision to enroll in an HMO (Acito 1978; Scitovsky et al. 1978; Berki and Ashcraft 1980; Juba et al. 1980; Schuttinga et al. 1985; Grazier et al. 1986; and Welch and Frank 1986). However, as Welch and Frank (1986) reported, these studies only concentrated on a specific population, and therefore the results can only be generalized to a limited extent.

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<sup>9</sup> The "745 Study" is presently being conducted to follow up on the previous "733 Study." The study is once again comparing the cost of care at an MTF to care received under CHAMPUS. The report is scheduled to be published in the spring of 1996.

Also, none of these studies focused on the U.S. Department of Defense population. The closest such comparison evaluated the decisions of employees of the U.S. Department of Health and Human Services (Schuttinga et al. 1985).

Schuttinga et al. analyzed the decisions of 8,500 employees enrolled in the Federal Health Benefits Program when offered the choice of enrolling into an HMO or remaining with the traditional fee-for-service plan. The researchers reported that the employees decision to enroll into the HMO depended on the "price and comprehensives of benefits of each option" (Schuttinga et al. 1985).

#### **Studies on HMO and PPO Enrollment**

The aforementioned studies were conducted during the late 1970's and early to mid 1980's when HMOs were just beginning to take hold as a reasonable choice for one's health care. Since then, the U.S. healthcare system has become very sophisticated, offering consumers innovative choices in the delivery of medical services (Inglehart 1992). These new plans include HMOs, Preferred Provider Organizations (PPOs), Independent Practice Associations (IPAs), Exclusive Provider Organizations (EPOs), and Other Weird Arrangements (OWAs) (Kongstvedt 1994). Because of

this evolution in the U.S. healthcare system, researchers have begun to study consumers decisions when offered multiple healthcare plans, specifically HMOs and PPOs (Diehr et al. 1988; Wouters and Hester 1988; Strumwasser et al. 1989; and Billi et al. 1993). However, like the earlier studies, these studies focused only on a specific population and therefore the results can only be generalized in a limited manner.

Even though the various study results were limited, they identified possible dependent and independent variables, along with hypotheses tested in this study. Scitovsky et al. (1978) found that the major contributors affecting the consumer's choice of health plans was the consumers income and the distance the consumer lived from the primary care manager.<sup>10</sup> Several studies have also reported that statistically significant factors affecting HMO enrollment are marital status (Long et al. 1988), age and family size (Juba et al. 1980; Buchanan and Cretin 1986), and price of premiums and copayments (McGuire 1981; Arthur D. Little, Inc. 1983; Sweeney and Franklin 1986; and Long et al. 1988).

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<sup>10</sup> HMOs utilize a primary care physician (FP,GP, IM) to coordinate the care of members. When a member enrolls, he or she chooses a physician as a Primary Care Manager (PCM).

In addition, the Managed Risk Medical Insurance Board in collaboration with Kaiser Family Foundation (1995) found that information on competing plans' characteristics was the major factor when choosing a health plan.<sup>11</sup> Wouters and Hester (1988) evaluated patient choice in a PPO located in California. The results of the study indicate that those employees who chose the PPO were lower income, newly hired employees without additional health insurance (Wouters and Hester 1988). Strummwasser et al. (1989) supported these findings by observing that the employees who chose either the HMO or PPO option were "generally younger" than those who chose the traditional indemnity plan.

#### **Importance for Developing Marketing Strategies**

These studies and the resulting findings are important for developing sound marketing strategies for HMOs (Acito 1978). Sweeney and Franklin (1986) stated that "enrollment projections are crucial to the (HMO's) financial planning and staffing" and Grazier et al. (1986) explain that a plan "must be able to identify the type of subscriber the plan would attract" in order to effectively market it. The

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<sup>11</sup> Even though information on competing plans' will not be included in this study, it is important to remember that the Military Health Service System is in competition with the plethora of managed care organizations.

findings can also be used to help predict those individuals who are likely to enroll in HMOs and PPOs. Welch and Frank (1986) used data from a national data set to develop predictors of HMO enrollees. Organizations want to predict "who" will enroll in HMOs and PPOs to help calculate health care expenditures.

Most of the studies in this arena concentrated on "risk selection" and "anticipated health care utilization (Bice 1975; Buchanan and Cretin 1986; Robinson et al. 1993). Other studies, however, have looked at the correlation of amount of money spent on marketing and enrollment growth (Menges 1988). Menges provides industry norms for all categories of HMOs so that other HMOs can assess their marketing efforts.

Finally, Strasser (1984) reports that organizations have developed strategies designed to encourage certain employees to choose the HMO option. However, while the TRICARE Service Contractor is not allowed to develop a marketing strategy "designed to discriminate, or have the effect of discriminating, against any beneficiaries on the basis of health status, age, race, sex, family size, sponsor status, or sponsor rank" (BAFO 1995) the MTF commander is



given the authority to establish an enrollment policy based on both utilization rates and MTF capacity (OASD(HA)TRICARE Policy Guidelines 1996).<sup>12</sup> The intent of this study was to identify the relevant characteristics of those who are enrolling into the PRIME Direct and PRIME Network option. Additionally, it was the intent of this study to help focus the marketing effort by differentiating the characteristics of those enrolling in the PRIME Direct option from those who are not presently enrolling.

### **Research Designs**

The literature provided several different types of research designs for this study. Grazier et al. (1986) used interviews, claims, and medical records of Washington state employees who were offered a traditional Blue Cross plan and a Group Health Cooperative plan. Grazier et al. (1986) then used both bivariate and multivariate analysis in testing significance of factors affecting plan choice. Scitovsky et al. (1978) analyzed the enrollment decisions and utilization rates of Stanford University employees who were offered a fee-for-service plan and a prepaid group plan. The study

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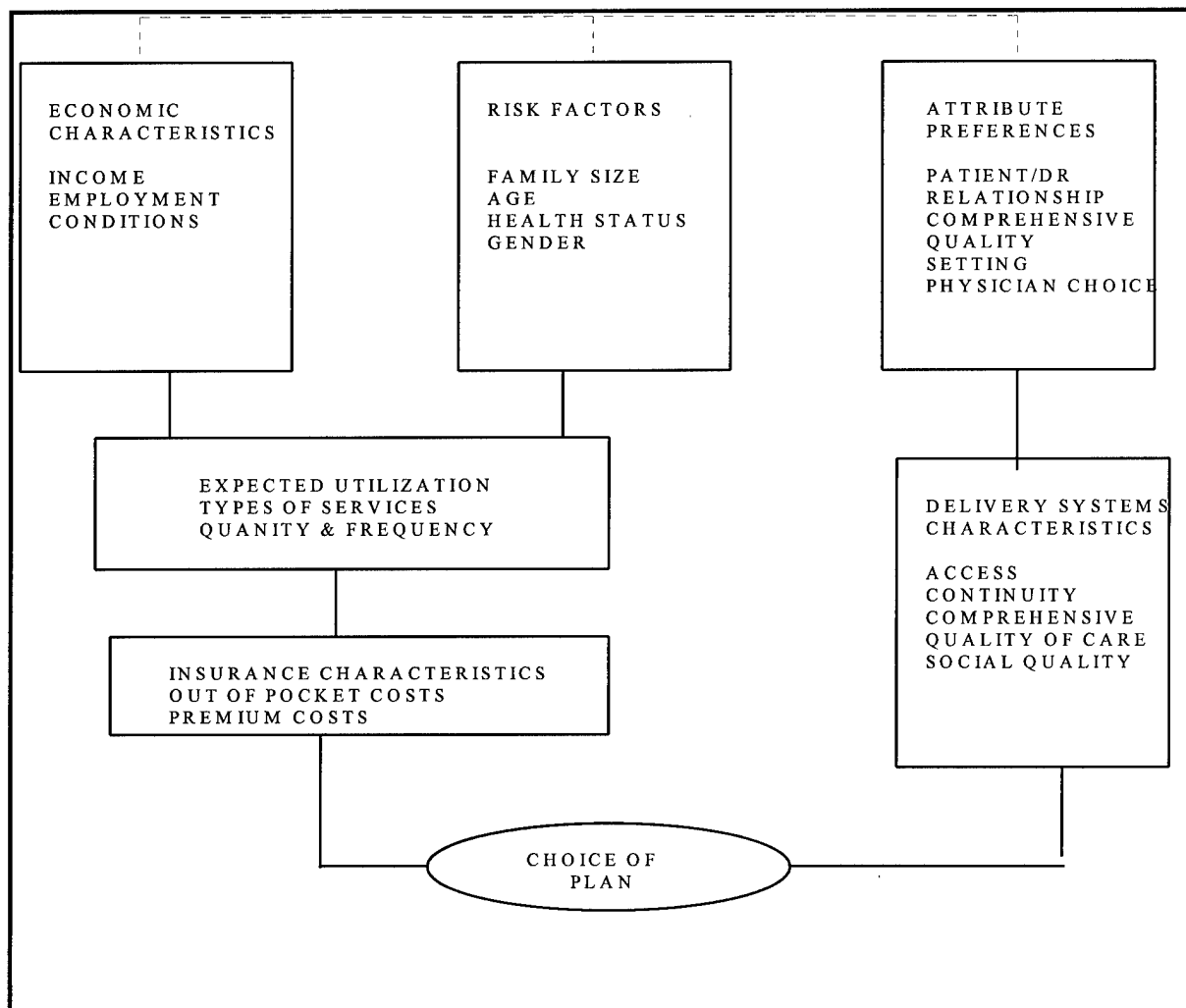
<sup>12</sup> Lemoore Naval Hospital's enrollment policy establishes that all PRIME enrollees residing within a 25 mile radius of Lemoore Naval Hospital will have the MTF as their designated PCM. Beale Air Force Hospital's enrollment policy establishes that all PRIME enrolled retiree's designate a network provider as their PCM. Only Lemoore's policy was established during the open enrollment period.

used an hour long interview and members' medical records to collect the necessary data. The data was then tested using multivariate analysis (Scitovsky et al. 1978). McGuire (1981) studied employees of Yale and the effect the premium and other out of pocket expenses had on enrollment. McGuire developed probability equations and linear equations to determine patients' enrollment decisions (1981).

Arthur D. Little, Inc. (1983) conducted a study for the Department of Health and Human Services in which one of the major objectives was to determine how "specific employee characteristics influence the choice of a plan." The study accomplished this task by gathering data on employees from four different organizations. These organizations were different in purpose, however, all offered employees a HMO, PPO, and a traditional indemnity plan. The researchers developed, and then tested hypotheses on demographic and plan choice using multivariate techniques (Arthur D. Little, Inc. 1983).

The literature review identified several independent variables used in this study. These independent variables are: age, gender, family size, other health insurance, and

MTF catchment area.<sup>13</sup> Other variables used in this study include sponsor's rank and beneficiary category. The conceptual model provided as Figure 1 was used for this study. This model is an adaptation of a model developed by Berki and Ashcraft (1980).



**Figure 2: Conceptual Model of Enrollment Decision Process**

<sup>13</sup> MTF catchment area is defined as a forty mile radius around the MTF.

### Purpose Statement

The purpose of this project was to develop a linear model that predicts penetration rates of PRIME enrollment for different demographic populations. The full linear model will help Lead Agents formulate a marketing strategy for enrolling new members. The project also provides Lead Agents with an effective surveillance tool which may be used by determining who is enrolling into the PRIME Direct and PRIME Network option. The study also evaluated the effectiveness of different MTF enrollment policies. This study did not evaluate utilization rates of the EXTRA or STANDARD option.

## METHODOLOGY

### Study Population

The population studied are the CHAMPUS eligible beneficiaries residing in Region 10.<sup>14</sup> Region 10s geographic area includes mid-central California, San Francisco/Oakland, Fairfield/Vacaville, Sacramento, and Northern California to the Oregon border (Appendix 2). CHAMPUS eligible beneficiaries include active duty dependents, retired members of the armed forces not eligible for Medicare, and their dependents. Active duty dependents include spouses, children, and other financially dependent family members enrolled in the Defense Eligible Enrollment Reporting System (DEERS). The size of the study population is approximately 207,771 people, with 64,469 being active duty dependents, 66,486 being retired, and 75,993 being retired family members (DMIS V.1.0; RAPS V.8.1 1994).<sup>15</sup>

The study population, in general, is familiar with the tenets of managed care.<sup>16</sup> Grazier et al. (1986) reports

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<sup>14</sup> This study did not include active duty members since all active duty members are automatically enrolled in TRICARE Prime via the CHCS Managed Care Module. Members are assigned a PCM with demographic and PCM location information transmitted to DEERS via CHCS (OASD(HA) TRICARE Policy Guidelines 1996).

<sup>15</sup> The remaining eligible population includes National Guard, Active Duty Reserve, and their respective family members.

<sup>16</sup> As previously mentioned, the military population in Northern California has been exposed to managed care programs such as CRI in 1988.

that this is important because it takes a significant marketing effort to educate consumers on the intricacies of a managed care plan. The MHSS in California has been participating in the CHAMPUS Reform Initiative (CRI) since 1988. CRI offered eligible beneficiaries three similar options that TRICARE now offers: CHAMPUS Prime, Extra, and Standard. However, under CRI, beneficiaries were not charged an enrollment premium and had a lower copayment than they now have under TRICARE. TRICARE's new Uniform Benefits, effective October 1, 1995, raise copayments in most cases for all enrollees and include an enrollment premium for retirees and their dependents. To what extent these increases will deter the population's enrollment rate is not known, however, it is anticipated to have some effect on retirees and their dependents (Aetna Briefing 1995).

A portion of this population is also considered transient since military tours last between 1 and 4 years. Therefore, a percentage of the study population may not be familiar with CRI or TRICARE.

The population may also be affected by the Base Realignment and Closure (BRAC) list which includes Oakland Naval Hospital, Castle Air Force Base, and most recently,

McClellan Air Force Base in Sacramento, California. This may have affected a beneficiary's choice between DIRECT and NETWORK since a convenient military PCM may no longer be available. Also, as noted earlier, Lemoore's population may be affected by the established enrollment policy.

#### Sources of Data and Research Design

A non-experimental, retrospective study of the demographic and socioeconomic characteristics of TRICARE eligible beneficiaries was conducted. The study used enrollment data collected by the TRICARE Region 10 Service Contractor (Aetna)<sup>17</sup> during the open enrollment period which started 01 August 1995 and ended 30 September 1995. The contractor also provided existing data of beneficiaries who were previously enrolled in the CRI transition program, but who chose not to re-enroll into TRICARE Prime during the same open enrollment period. This data was included to assess predictors of non-re-enrollment. A sample of 350 CHAMPUS eligible beneficiaries records were randomly selected from 1,000 eligible beneficiaries records provided by the TCS's data base.

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<sup>17</sup> Aetna Government Health Plans is the present TCS. However, the original contract bid was awarded to QualMed. Foundation Health Plans (FHP) protested the decision and the GAO upheld the appeal. The contract was awarded to FHP on August 31, 1995. FHP will take over the contract in April, 1996.

The study used already existing data, and since no personal identifiers were attached to the data, subjects' consent was not sought for participation in this study. Subjects' consent, along with approval from the Institutional Review Board, was not required for this type of study as stated in Air Force Regulation 40-403.<sup>18</sup>

The data collected was generated from the PRIME enrollment form (Appendix 3). This form was mailed by the TCS contractor to all members registered in DEERS prior to the open enrollment period. All beneficiaries, even those who were enrolled in the CRI transition program, were mailed the TRICARE Prime enrollment form. Beneficiaries already enrolled in Prime were asked to re-enroll in TRICARE Prime by completing and returning the enrollment form. The data of interest included: the plan the member chose (PRIME Direct or PRIME Network), the status of the enrollee (ADD, Ret, RetF), and the rank of the member or members sponsor ( $\leq E4$ ,  $\geq E5$ ); the number of dependents covered, the enrollees zip code (to determine which MTF catchment area lived in), the member's gender and age, and whether the

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<sup>18</sup> Air Force Instruction 40-403-2.2.2 states the instruction does not apply to studies involving: statistical information from patients' records, subjects' responses to questionnaires or surveys..., unless specific individuals are identified in the data as published or presented.



enrollee had other medical insurance including a CHAMPUS supplemental. The collected data was entered into Microstat on a personal computer for statistical analysis (Ecosoft, Inc. 1978-1985).

Testing for validity means "measuring the right things" (Kerlinger 1986). The three types of validity to be tested for are criterion-related, construct, and content (Kerlinger 1986). Construct validity in this study was supported by the literature review. The literature revealed that the significant constructs that measure an individual's decision to enroll in a particular health care plan are: age, income, family size, and gender. These constructs have been included in this study to ensure validity. Validity is further tested by evaluating the accuracy of the PRIME enrollment form. This was accomplished by evaluating the correlation matrix. For example, age was positively and significantly related to higher rank (>E5) and sponsor's status.

Reliability of this study was achieved by entering a sample of the data into the spreadsheet, and then re-entering that same data. The data was then evaluated for consistency. Since there were no inaccuracies associated

with the data entry, then reliability of the study was accomplished, since reliability is the "accuracy and precision of a measuring process" (Emory 1985). Also, once validity has been demonstrated, reliability may be assumed, since "reliability is a necessary (but not sufficient) precondition for validity" (Soeken 1985).

### **Dependent and Independent Variables**

There were three dependent variables for this study. The first dependent variable is PRIME Direct enrollment, the second is PRIME Network enrollment, and the third is non-enrollment.<sup>19</sup> The entire set of independent predictor variables includes the previously listed variables extracted from the literature review: age, gender, family size, other medical insurance, MTF catchment area (Beale, McClellan, Travis, Lemoore) and non-catchment area with, in addition, rank ( $\leq E4$ ,  $\geq E5$ ), and member status (ADD, Ret, RetF). The variables were coded as follows:

PRIME Direct enrollment: 1 for Direct, 0 for other.

PRIME Network enrollment: 1 for Network, 0 for other.

Not enrolled in PRIME: 1 if not enrolled, 0 for other.

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<sup>19</sup> Non-enrollment is actually a measure of beneficiaries choosing not to re-enroll (beneficiaries who were previously enrolled in PRIME under the CRI transition program who chose not to enroll in TRICARE PRIME).

ADD: 1 if ADD, 0 if other.

RET: 1 if Retired, 0 if other.

RETFAM: 1 if a Retired family member, 0 if other.

>=E5: 1 if >=E5, 0 if other.

Family size: continuous in # of dependents.

Gender: 1 if male, 0 if female.

Age: continuous in years.

Beale: 1 if zip code is in Beale's catchment area, 0 if other.

McClellan: 1 if zip code is in McClellan's catchment area, 0 if other.

Travis: 1 if zip code is in Travis' catchment are, 0 if other.

Lemoore: 1 if zip code is in Lemoore's catchment area, 0 if other.

NON CAT: 1 if zip code is in MTF's non-catchment area, 0 if other.

Other health insurance: 1 if member has other medical insurance, 0 if no additional coverage.

### **Identification of Hypotheses**

The general null hypothesis tested is that PRIME option enrollment is not dependent on any of the predictor

variables. The general alternate hypothesis is that PRIME option enrollment is dependent on one or more of the predictor variables. Other specific hypotheses formulated from the literature review include:

1. PRIME DIRECT enrollment is influenced by demographic characteristics (age, gender, rank, status, and family size).
2. PRIME DIRECT enrollment is influenced by the member residing in a MTF catchment area.
3. PRIME DIRECT enrollment is dependent on whether the member has other medical insurance.
4. PRIME Network enrollment is influenced by the members age.
5. Non-enrollment is dependent on whether the member has other medical insurance.
6. Non-enrollment is dependent on whether the member lives in a non-catchment area.

#### Underlying Assumptions

The underlying assumptions for this study were:

1. Enrollees in PRIME are predisposed to receive medical care.

2. Enrollees in PRIME understand the benefits and services offered in the different healthcare plans.

3. Enrollees in PRIME perceive a need to utilize these services.

### **Statistical Analysis**

Three general linear equations were developed in order to perform multiple linear regression. The three general linear equations are:

$$Y_1' = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 + b_7X_7 + b_8X_8 + b_9X_9 \dots b_{13}X_{13}$$

$$Y_2' = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 + b_7X_7 + b_8X_8 + b_9X_9 \dots b_{13}X_{13}$$

$$Y_3' = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 + b_7X_7 + b_8X_8 + b_9X_9 \dots b_{13}X_{13}$$

Zero-order correlation matrices were developed to identify possible significant relationships between the three dependent variables ( $Y_1, Y_2$  and  $Y_3$ ) and the independent variables ( $X_1$  through  $X_{13}$ ). Those predictor variables which were calculated to have significant relationships at an alpha level of .05 (calculated value exceeds the critical value) were included in the general linear equation.

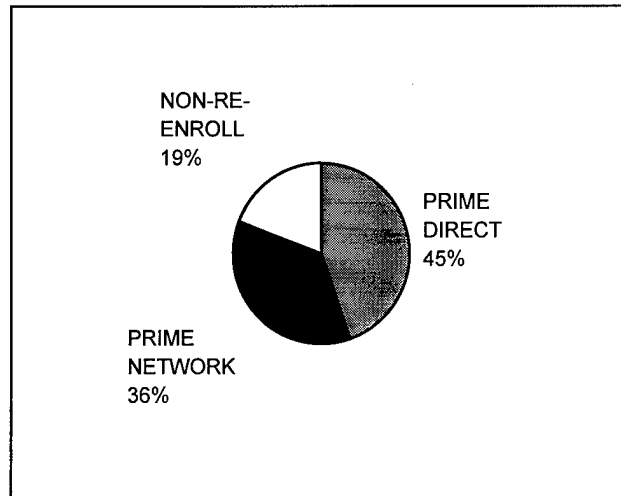
Student's  $t$  - tests were then conducted to determine the statistical significance of the correlation coefficient at an alpha level of .05. Stepwise regression was then performed to determine the predictors of PRIME Direct enrollment, PRIME Network enrollment and Non-enrollment (Grazier et al. 1986). Correlation coefficients ( $R$ ), coefficients of determination ( $R^2$ ), and F-tests were calculated to test for significance at an alpha level of .05. A multivariate model was developed to predict PRIME Direct and PRIME Network enrollment by including these significant predictor variables.

Student's  $t$  tests, a test between two group means with unequal variance, were conducted to compare the effectiveness of different enrollment schemes employed by the different MTF commanders. Member PRIME enrollment data was entered by MTF catchment area into a Microstat data file. The PRIME Direct enrollment means of the different MTFs were then tested for significance between each other at an alpha level of .05.

## RESULTS

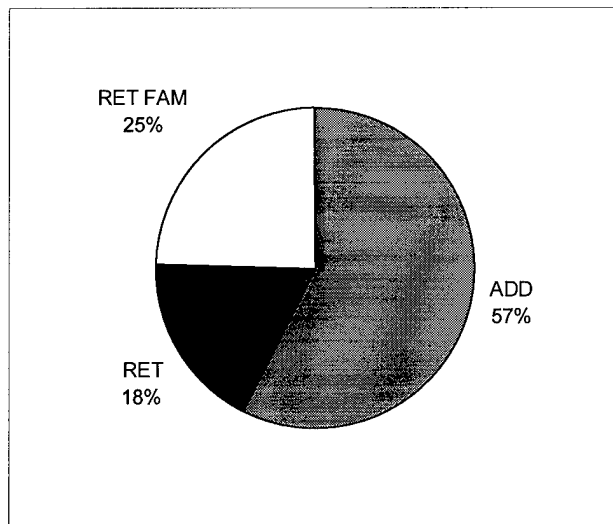
Descriptive statistics of the data set for the dependent and independent variables are provided in Table 1. Evaluation of the means reveal that the respective sub-groups, i.e. enrollment, equal 1.00 when added, along with the other sub-groups (status and catchment area). Therefore, the accuracy of the data entry is believed to be high.

Of the 350 members, 158 enrolled in PRIME Direct while 126 enrolled in PRIME Network, and 66 chose not to re-enroll (Figure 3). Of those enrolled, 57% are active duty dependents, 18% are retired and 25% are retired family members (Figure 4). Of the 66 members who chose not to re-enroll, 64% are active duty dependents, 13% are retired and 23% are retired family members.



**Figure 3: Prime Enrollment Penetration Rates**

\*NOTE: This chart does not reflect the population that never enrolled in Prime (during CRI or during the open enrollment period), which is around 40%.



**Figure 4: Beneficiary Category Break-Out**

\*NOTE: This chart does not reflect the population that enrolled in Prime (during CRI or during the open enrollment period), which is around 40%.



**Table 1: Descriptive Statistics**

VARIABLE	MEAN	STANDARD DEVIATION
DIRECT	.4514	.4983
NETWORK	.3600	.4807
NOT ENROLLED	.1886	.3917
ADD	.5971	.4912
RET	.1543	.3616
RET FAMILY	.2457	.4311
>=E5	.9000	.3004
FAMILY SIZE	2.728	1.166
GENDER	.3914	.4888
AGE	28.87	19.95
BEALE	.1143	.3186
MCCLELLAN	.1514	.3186
TRAVIS	.2429	.4294
LEMOORE	.0857	.2803
NON CATCHMENT	.4057	.4917
OTHER INSURANCE	.0486	.2153

Zero-order correlation matrices for the data were developed for the dependent variables PRIME Direct, PRIME Network, and non-enrollment (Table II, critical value  $r = \pm 0.10$ ). The correlation matrices provide indicators of significant relationships between the dependent and independent variables.

Tables III, IV, and V provide statistically significant results for Pearson's  $r$  for the three respective dependent variables. From the data set, there is a significant positive relationship between enrollee's family size and PRIME Network enrollment ( $r = .12$ ). Also, even though Lemoore Naval Hospital has an enrollment policy which mandates that any member living within 25 miles of the hospital must enroll in PRIME Direct, members within the Lemoore catchment area (40 mile radius) as a group/whole have a tendency not to enroll in PRIME Direct ( $r = -.18$ ). More importantly, active duty family members (ADD) are choosing not to enroll in PRIME Direct but instead choosing to enroll in PRIME Network ( $r = -.31$ ).

**Table 2: Correlation Matrix**

	DIR	NET	NOT	ADD	RET	RTF	>=E5	FM#	GEN	AGE	BEA	MCL	TRA	LEM	NCA	OHI
DIR	1.00															
NET	-.680	1.00														
NOT	-.437	-.362	1.00													
ADD	-.308	.228	.113	1.00												
RET	.140		-.105	-.520	1.00											
RTF	-.242	.221		-.695	-.244	1.00										
>=E5				-.274	.142	.190	1.00									
FM#		.119		.154	-.220		.159	1.00								
GEN				-.129	.468	-.254			1.00							
AGE	.194	-.141		-.614	.519	.253	.171	-.438		1.00						
BEA	.252	-.270									1.00					
MCL				-.238	.150	.148	.114			.142	-.152	1.00				
TRA	.116	-.203						.124			-.203	-.239	1.00			
LEM	-.175	.196									-.110	-.129	-.173	1.00		
NCA	-.223	.253		.169	-.111	-.107					-.297	-.349	-.468	-.253	1.00	
OHI		-.169	.333	-.194		.211							-.128			1.00

**Table 3: Testing Significance of Pearson's r for PRIME Direct**

Variable	r	t	df	p
ADD	.31	6.05	348	.0000
RET	.14	2.58	348	.0103
RETFAM	.24	4.66	348	.0000
AGE	.19	3.68	348	.0003
BEALE	.25	4.85	348	.0000
TRAVIS	.12	2.17	348	.0307
LEMOORE	.18	3.32	348	.0010
NON-CATCH	.22	4.27	348	.0000

**Table 4: Testing Significance of Pearson's r for PRIME NETWORK**

Variable	r	t	df	p
ADD	.23	4.36	348	.0000
RETFAM	.22	4.22	348	.0000
FAM SIZE	.12	2.23	348	.0266
AGE	.14	2.66	348	.0082
BEALE	.27	5.22	348	.0000
TRAVIS	.20	3.86	348	.0001
LEMOORE	.19	3.72	348	.0002
NON-CATCH	.25	4.88	348	.0000
OHI	.17	3.21	348	.0015

**Table 5: Testing Significance of Pearson's r for Non-Enrollment**

Variable	r	t	df	p
ADD	.11	2.12	348	.0345
RET	.10	1.97	348	.0500
OHI	.33	6.58	348	.0000

The regression equation for prediction of PRIME Direct enrollment for the data is:  $\text{Direct Enrollment} = -.0406 + .2755(\text{ADD}) + .5000(\text{RET}) + .6202(\text{RETFAM}) + .0018(\text{AGE}) + .4792(\text{BEALE}) + .1983(\text{TRAVIS}) - .1585(\text{LEMOORE}) + .0205(\text{NONCAT})$ .

The regression equation for PRIME Network enrollment is:  $\text{Network Enrollment} = .8282 - .4895(\text{ADD}) - .6817(\text{RETFAM}) + .0331(\text{FAMSIZE}) - .2022(\text{TRAVIS}) + .2287(\text{LEMOORE}) + .1073(\text{NONCATCH}) - .3198(\text{OHI})$ .

The regression equation for Non-re-enrollment is:  $\text{Non-re-enrollment} = .0959 + .2140(\text{ADD}) + .0701(\text{RET}) + .7320(\text{OHI})$ . Inferential statistics for PRIME Direct, PRIME Network, and Non-re-enrollment are provided in Table VI.

**Table 6 : Inferential Statistics**

LINEAR MODEL	R-SQUARED	F-RATIO	df
PRIME DIRECT	.2397	8.149 (p = .0000)	(2,349)
PRIME NETWORK	.2390	8.117 (p=.0000)	(2,349)
NON-ENROLLMENT	.1970	6.341 (p=.0000)	(2,349)

Results comparing PRIME Direct enrollment means between MTF's are provided in Table VII.

**Table 7: Difference Between MTF PRIME Direct Enrollment Rates: Pooled Estimate of Variance**

MTFs	Difference	df	T	Prob
TRA/BEALE	.2623	92	3.39	.0000
BEA/LEM	.8000	56	11.28	.0000

## DISCUSSION

The results indicate that socio-demographic characteristics do influence an eligible beneficiary's decision whether to enroll in TRICARE Prime Direct or Network. The evidence also supports that once a beneficiary has decided to enroll into TRICARE Prime, he or she is then influenced again by socio-demographic characteristics when choosing a Primary Care Manager. In addition, comparing the effectiveness of different enrollment policies on TRICARE Prime indicates that a statistically significant difference does exist between MTF's enrollment rates.

### Discussion of Hypotheses

#### **General Null Hypothesis**

The general null hypothesis is rejected. PRIME option enrollment (Direct and Network) is dependent on some of the predictor variables used in this study. The specific categories of predictor variables that are relevant include enrollee status (ADD, RET, RETFAM), age, and MTF catchment/non-catchment area.

### **Hypothesis One**

Hypothesis one is accepted. As mentioned above, since the general null hypothesis is rejected, the alternate is accepted.

The results of this study indicate that active duty dependents who enroll into TRICARE Prime have a tendency to choose a network provider vice a MTF provider. This result should alarm supporters of the military health services system (MHSS). It also supports the contemporary concern that the MHSS has lost the loyalty of its service line customer.

Possible explanations for this are numerous. First, active duty spouses who are female are generally in their child bearing years. Weiss and Senf reported that women like having an established relationship between themselves and their obstetrician/gynecologist (1990). At several MTFs, and specifically at David Grant Medical Center, patients do not have an assigned OB/GYN and therefore



usually are treated by a different provider every visit.<sup>20</sup>

Taylor et al. reports that families enjoy the preventive services and maternity benefits provided by HMOs (1995).

Another explanation is that active duty family members are dissatisfied with the system. Several studies have been conducted evaluating patient satisfaction within the MHSS. The studies report patients are discouraged with the amount of time it takes to make an appointment, and then the amount of days it takes to be seen by a provider (1984 Beneficiary Survey; Rand 1990). TRICARE has addressed these issues by establishing limits for the time to make an appointment and the amount of time to be seen by a provider (RFP 1995). TRICARE also addresses these shortcomings by utilizing healthcare finders who help arrange appointments for eligible beneficiaries who choose the PRIME option.

The results indicate that as eligible beneficiaries get older, they are more likely to choose a MTF provider than a network provider. This result is a logical corollary to the above observation. Active duty family members are generally younger than retirees and their family members.

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<sup>20</sup> MTFs, even under the auspices of TRICARE, traditionally assign beneficiaries to general PCMs vice specific PCMs, i.e. the MTF itself or a clinic within the MTF is designated as the PCM. Seldom are beneficiaries assigned an actual doctor as a PCM.

The analysis indicates that not only are active duty family members more likely to choose a network provider, but that the opposite is true in that enrolled retirees and their family members are more likely to choose a MTF provider for their primary care manager.

The most likely explanation for this is that retirees have already paid an enrollment premium for PRIME enrollment (\$230/\$460) and do not wish to pay the additional copay associated with choosing a network provider. Another logical reply is that retirees and their family members are familiar with and comfortable with the MHSS which they have been using for several years. The Congressional Budget Office (CBO) reports that in a study conducted on the Federal Employee Health Benefits Program (FEHBP), "program retirees were the least interested in changing [healthcare insurance]" and that "older employees will typically stick with their current plan" (Blankenau 1993).

Results show that enrollees who have larger families tend to choose a Network PCM. Taylor et al. in a 1995 study of HMO enrollment cited that members of HMOs had relatively larger families than those choosing other types of health care plans (1995). Other studies on HMO enrollment have had

similar findings (Juba et al. 1980; Buchanan and Cretin 1986; Davis et al. 1995). These studies support the choice of PRIME over the Extra or Standard options, however, they do not explain the choice of a network PCM over a MTF PCM. Although the MTFs within Region 10 provide pediatric services, they may not provide enough services for beneficiaries (Region 10 Environmental Assessment 1995). Weiss and Senf in a 1990 survey on patient's choice of HMOs stated that a perceived inadequacy of services affected patient's decisions when choosing a HMO (1990). Evidence of this in Region 10 is with Lemoore Naval Hospital's enrollment data of pediatric patients. For the data used in this study, nearly every child under age 15 in Lemoore's catchment area had a network provider designated as their PCM.

Beneficiaries with larger families may also have chosen a network PCM so that the entire family could have the same doctor. The traditional "family doctor" is often lost in the MHSS, except for families fortunate enough to be empaneled with the MTF's family practice clinic. Specifically, at DGMC, the family practice clinic is only able to empanel 8000 families, and even then continuity of

care is disrupted when either the provider or family is transferred.

## **Hypothesis 2**

Hypothesis 2 is accepted. Beneficiaries residing outside of an MTF's catchment area have a tendency to choose a network PCM. Scitovsky's et al. study on consumer's choice of health plans is consistent with this result (1978). The opposite is true for most of the MTFs within Region 10, i.e. beneficiaries residing within an MTFs catchment area tend to choose the MTF as their PCM. The two exceptions to the general trend are Mather/McClellan Air Force Hospital, which is not statistically significant, and Lemoore Naval Hospital which reveals the opposite tendency. However, even though Mather/McClellan was non-significant, it was positively correlated. Lemoore's result could be skewed as mentioned above, with a large proportion of Lemoore's enrollment data being adolescents designating a network PCM.

Other than the above inconsistencies, the result is positive for MTF commanders. The study suggests that MTF commanders are successful in capturing the workload for those beneficiaries residing in their catchment areas.

### **Hypothesis 3**

Hypothesis 3 is accepted. Eligible beneficiaries who indicated having other health insurance (OHI) were less likely to enroll into TRICARE Prime Direct. As TRICARE PRIME is an HMO equivalent, this result is logical and compares to similar findings by Wouters and Hester (1988). Also, it should be mentioned that in talking to an Aetna TRICARE Service Center representative (Susan Dawson, personal interview, 16 February, 1996), Aetna discourages beneficiaries who already have adequate health insurance coverage from enrolling into TRICARE Prime.

### **Hypothesis 4**

Hypothesis 4 is accepted. Older members are inclined to choose a MTF PCM while younger members are likely to choose a network PCM. This coincides nicely with the earlier result that retirees are remaining with the MTF and active duty family members are seeking a contracted provider. As previously mentioned, the older beneficiaries have been using the MHSS for a longer period and therefore are more familiar and comfortable with it. This finding

also adds validity to the study since age and status are highly correlated with each other.

#### **Hypothesis 5**

Hypothesis 5 is accepted. Beneficiaries who indicated having other medical insurance were inclined not to re-enroll in TRICARE Prime. Once again this finding is not surprising and is very logical. Those beneficiaries who have other health insurance, whether through a spouse's employment or through a secondary means, are probably familiar and satisfied with it. Even though TRICARE almost certainly offers a better financial benefit, beneficiaries are choosing to remain with their other form of medical insurance. The CBO reported that "although members are not totally unresponsive to price, it still takes a significant price change for members to change plans" (Blankenau 1993). Also, in Weis and Senf's survey, the most common response for changing health care coverage was not price, but instead maintaining the same provider (1990).

#### **Hypothesis 6**

Hypothesis 6 is rejected. Non-re-enrollment in PRIME (Direct and Network) was not significantly influenced by the beneficiary residing outside a MTF catchment area. This

result is somewhat surprising since some beneficiaries reside in a non-PRIME area.<sup>21</sup> However, this result could be skewed since members who chose not to re-enroll could have moved from their address indicated in DEERS.

#### Utility of Results

Although the results can only be generalized for Region 10, they do offer useful information for all 12 TRICARE regions. Specifically, these results indicate that the Lead Agent, TCS contractor, and MTF commanders need to redirect the marketing effort toward the service line customer, i.e. active duty and his/her family members. Active duty family members are talking with there wallets as they are willing to pay copays for each visit to their designated network PCM. Also, it appears that those with the loudest voice receive the most attention. The retirees have been very vocal about the enrollment premium implemented under the new Uniform Benefits package. As a result, the marketing effort has been focused to address this concern and has been successful. The results indicate when retirees do enroll

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<sup>21</sup> In Region 10, as in all regions, certain remote areas are not covered by the TCS contractor under TRICARE. In Region 10, these areas include parts of northern California where there are no MTFs and where the contractor is unable to develop a network.

into TRICARE Prime, they are choosing to remain within the MHSS.

Further utility of this study indicates certain enrollment policies may not be as effective as anticipated. Comparing Beale Air Force Hospital's enrollment rate and Lemoore Naval Hospital's enrollment rate, which have different enrollment policies, resulted in a statistically significant difference. Although the results for Lemoore Naval Hospital may be somewhat skewed by a high proportion of adolescent enrollment, it does offer insight into possible shortcomings of services offered.

Finally, by utilizing the developed linear equations, MTF commanders can predict who will enroll into PRIME Direct, PRIME Network, and who will not enroll. Knowing this will help MTF commanders establish policies and guidelines for ensuring optimal use of their respective facilities. The equations are also beneficial for the commanders and the TCS contractor in working together in developing resource sharing agreements<sup>22</sup> to address the needs of their beneficiaries. The equations will also be

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<sup>22</sup> OCHAMPUS "Optimizing Resource Sharing Opportunities under managed Care Support Contracts" (Capt J. Montgomery 1994) explains resource sharing under TRICARE. Capt Montgomery states: "Resource sharing is a feature of Managed Care Support contracts which allows the contractor, through agreements with military treatment facility commanders, to provide personnel, equipment and supplies to enhance the services provided to CHAMPUS beneficiaries."



useful in determining the number of PCMs needed for each MTF when calculating PCM capacity.

## CONCLUSIONS AND RECOMMENDATIONS

The purpose of this project was to develop a linear model which predicts penetration rates of PRIME enrollment for different demographic populations. The linear models, used in conjunction with utilization and capacity reports, will help the Lead Agent and MTF commanders formulate a more effective marketing strategy for enrolling new members. The results indicate that Region 10's marketing strategy needs to be refocused on the active duty family member population.

The study also compared PRIME enrollment rates between different MTFs. Since the statistical tests were highly significant, it is recommended that each MTF use this methodology for monitoring the enrollment rates of its beneficiary population.

The literature review identified an important trend in the civilian health care marketplace. That trend is the emergence of PPOs as the fastest growing organization in managed care. This is important to the future success of TRICARE because the EXTRA option is equivalent to a PPO. Presently, all of the focus of TRICARE is on PRIME, and its

success. By ignoring EXTRA, the MHSS may be missing an opportunity to help reduce CHAMPUS costs by negotiating better rates in future TRICARE contracts. It is strongly recommended that a retrospective study be conducted on utilization rates of the EXTRA option by analyzing claims data. It is also strongly encouraged that eligible beneficiaries, who choose not to enroll in PRIME, be enrolled in EXTRA if they choose the option<sup>23</sup>. By having beneficiaries enroll in EXTRA, the Lead Agent will have beneficial information which will facilitate the development of a more effective network. The Lead Agent and MTF commanders will also be able to address this population and help bring them back into the MHSS.

The purpose of TRICARE is to ensure access while containing costs (TRICARE Policy Guidelines 1994). The method of containing costs is to have the optimal number of beneficiaries treated within the MHSS. The results of this study indicate that active duty beneficiaries are choosing to receive their care outside of the MHSS. If this trend continues, and the Lead Agent and MTF commanders do nothing

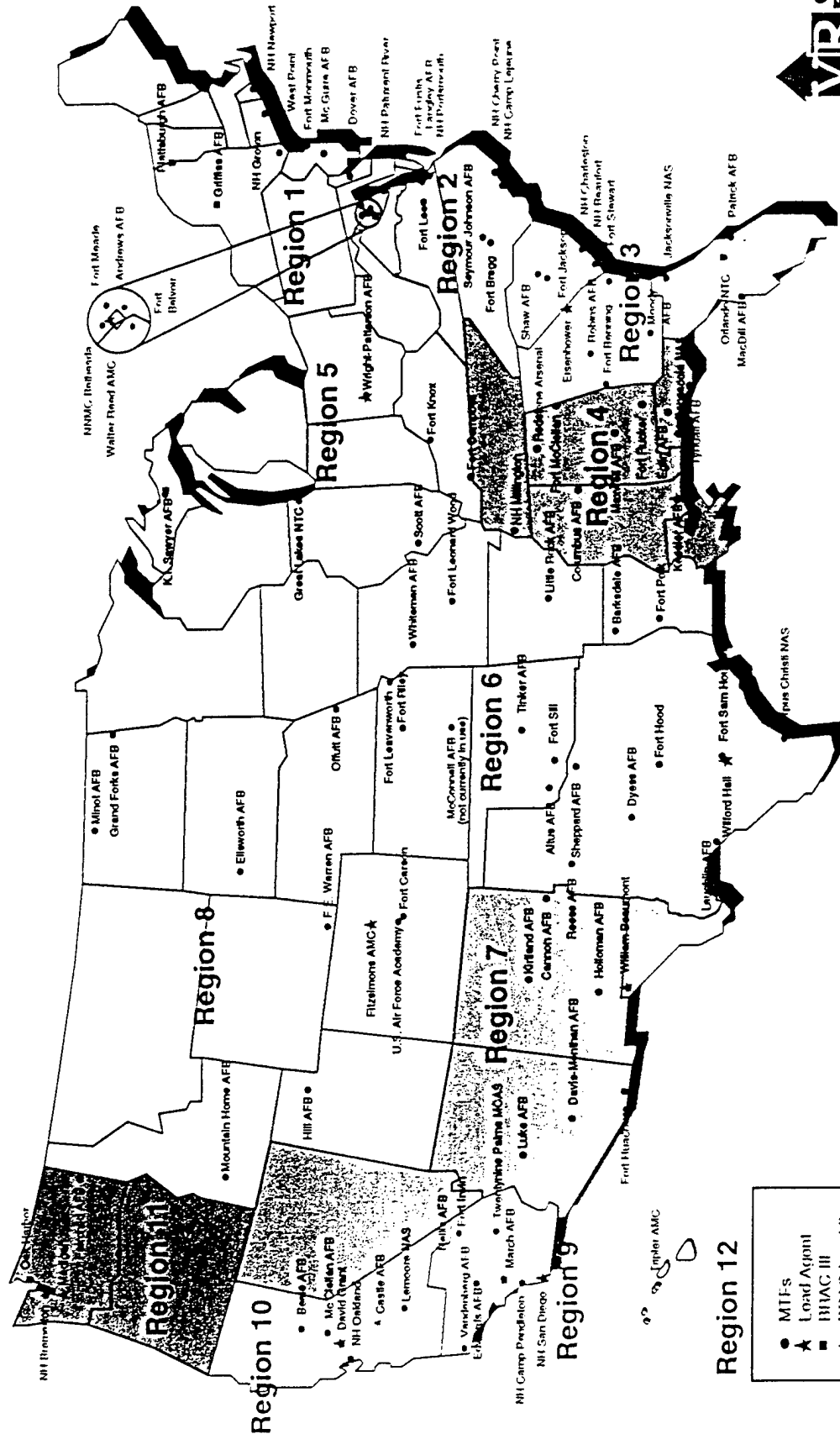
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<sup>23</sup> Enrollment in TRICARE Extra is presently not required, as established in OASD(HA) TRICARE Policy Guidelines, and may require a change to the TRICARE program regulations (32 CFR 199.18).

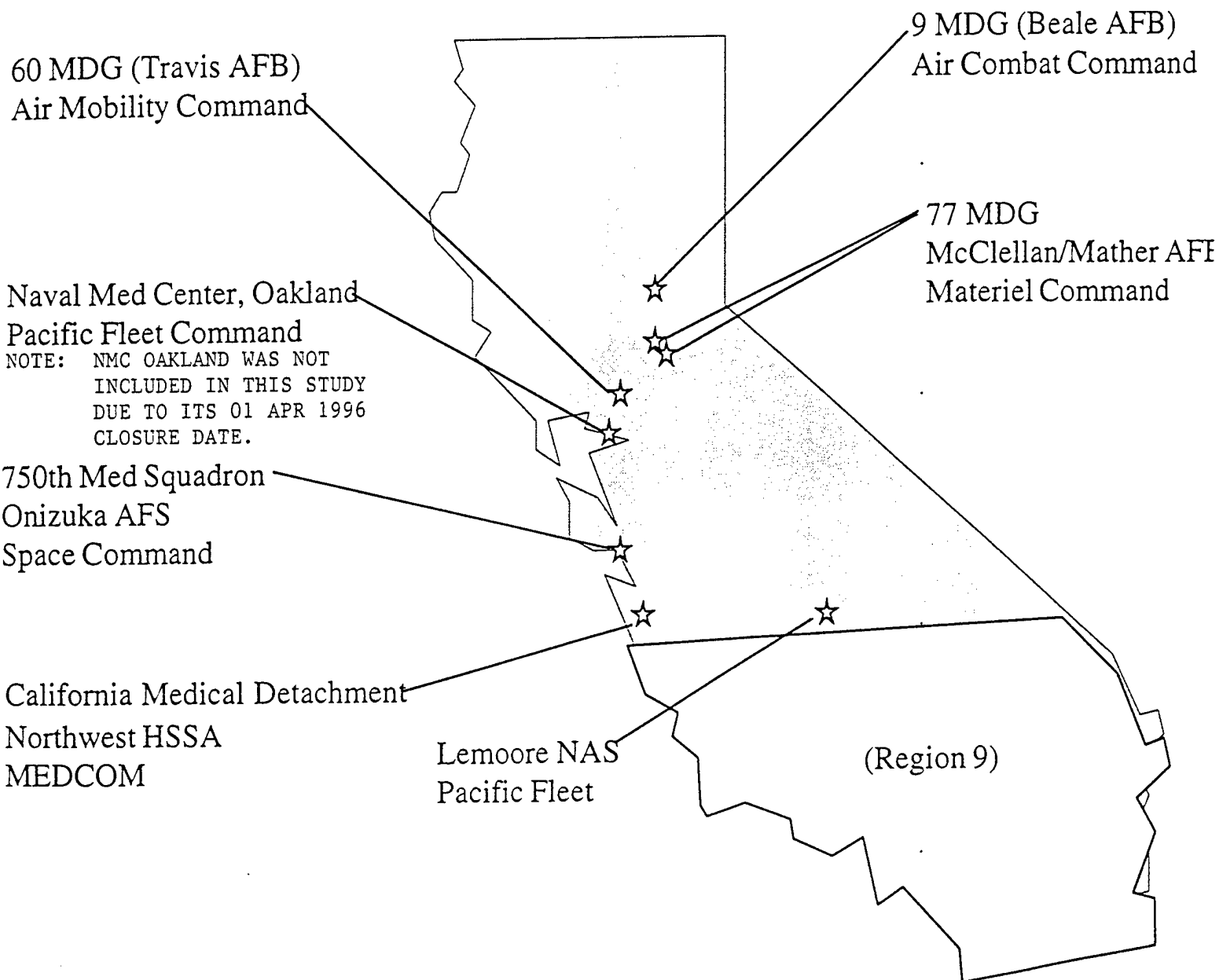
to reverse it, then the managed care support contract will no longer supplement the MHSS, but instead replace the MHSS.



## Quality Care for the Uniformed Services



# TRICARE Health Service Region 10



# TRICARE PRIME ENROLLMENT APPLICATION

Fee Paid _____	Method _____	Actra _____
Date _____	Payer _____	HMSA _____
RACFID _____	Effective _____	

## SPONSOR INFORMATION

1) SPONSOR NAME: LAST _____ FIRST _____ MI _____		2) SOCIAL SECURITY NUMBER _____	
3) Sex _____	4) BIRTHDATE _____	5) SERVICE BRANCH _____ USPHS _____ USAF _____ NOAA _____ US ARMY _____ USN _____ USMC _____ USCG _____ OTHER (Specify) _____	
6) PAY GRADE _____ E-4 & BELOW _____ E-5 & ABOVE _____		7) RETIRED? YES _____ NO _____	
8) DUTY STATION _____		9) PHONE: HOME ( ) _____ WORK ( ) _____ SPOUSE _____ WORK ( ) _____	
10) FULL TIME RESERVIST YES _____ NO _____		11) IF YES, RESERVIST END DATE: _____	
12) IS SPONSOR DECEASED? YES _____ NO _____		13) IS SPONSOR ENROLLING? YES _____ NO _____	

## 13) BENEFICIARY INFORMATION

NAME: LAST FIRST MI _____		CHECK ONE: SPONSOR _____ SPOUSE _____ CHILD _____		SEX _____	BIRTHDATE (MM/DD/YY) _____
STREET OR P.O. BOX _____		CITY _____	STATE _____	ZIP _____	SOCIAL SECURITY NUMBER _____
PRIMARY CARE MANAGER (PCM) LAST _____ FIRST _____ MI _____					
PRIMARY CARE MANAGER ADDRESS: STREET _____		CITY _____	STATE _____	ZIP _____	
NAME: LAST FIRST MI _____		CHECK ONE: SPONSOR _____ SPOUSE _____ CHILD _____		SEX _____	BIRTHDATE (MM/DD/YY) _____
STREET OR P.O. BOX _____		CITY _____	STATE _____	ZIP _____	SOCIAL SECURITY NUMBER _____
PRIMARY CARE MANAGER (PCM) LAST _____ FIRST _____ MI _____					
PRIMARY CARE MANAGER ADDRESS: STREET _____		CITY _____	STATE _____	ZIP _____	
NAME: LAST FIRST MI _____		CHECK ONE: SPONSOR _____ SPOUSE _____ CHILD _____		SEX _____	BIRTHDATE (MM/DD/YY) _____
STREET OR P.O. BOX _____		CITY _____	STATE _____	ZIP _____	SOCIAL SECURITY NUMBER _____
PRIMARY CARE MANAGER (PCM) LAST _____ FIRST _____ MI _____					
PRIMARY CARE MANAGER ADDRESS: STREET _____		CITY _____	STATE _____	ZIP _____	

## NOTE: IF ENROLLING MORE THAN THREE, PLEASE COMPLETE & ATTACH AN ADDITIONAL APPLICATION

14) DO YOU OR ANY DEPENDENTS REQUESTING ENROLLMENT HAVE OTHER HEALTH COVERAGE INCLUDING MEDICARE? YES _____ NO _____ FULL COVERAGE YES _____ NO _____ IF MEDICARE, INDICATE TYPE OF COVERAGE A _____ B _____ BOTH _____		15) DO YOU PLAN TO CONTINUE THIS COVERAGE? YES _____ NO _____ IF NO, WHY? _____	
WHO IS COVERED? INCLUDING SELF _____			
CARRIER'S NAME & ADDRESS _____			

NO. _____	GROUP NO. _____	EMPLOYER'S NAME (ONLY IF PROVIDING INSURANCE COVERAGE) _____
16) WHEN WAS THE LAST TIME YOU OR YOUR DEPENDENTS USED STANDARD CHAMPUS? PAST 12 MONTHS _____ 1-5 YEARS _____ OVER 5 YEARS _____ NEVER _____		17) HAVE YOU BEEN ISSUED A NAS OR DISENGAGEMENT IN THE LAST 12 MONTHS YES _____ NO _____

- 18) (1) I have read the information on benefits and restrictions of the TRICARE Prime program provided me. I understand the restrictions as stated or explained to me and hereby apply for enrollment. I understand that I must choose a Primary Care Manager (PCM) participating in TRICARE Prime or select a military hospital, clinic or dispensary, when available, as my Primary Care Site to be covered by the Plan. I understand that I must pay an initial and annual re-enrollment fee if the sponsor is retired/deceased. I understand if my fees are paid quarterly and I miss a payment, I will be disenrolled one calendar month after payment due date and will not be eligible for TRICARE Prime for 24 months. If I decide to obtain care which has not been coordinated by my PCM and authorized by the Health Care Finder, I understand that TRICARE Point of Service coverage will apply. I understand I must remain enrolled in TRICARE Prime for at least twelve consecutive months.
- (2) The plan will not discriminate, or have the effect of discriminating, against any beneficiaries on the basis of health status, age, race, sex, family size, sponsor status or rank.
- (3) I understand that my entitlement to TRICARE benefits will be confirmed through the Defense Enrollment Eligibility Reporting System (DEERS).
- (4) I authorize the Plan to examine, disclose and copy records of any physician, hospital, or provider when necessary for proper payment of benefits for all enrollees listed on this document.
- (5) I hereby certify that the information provided on this document is true and complete. I agree to abide by the provisions of membership. I must disenroll from TRICARE Prime when I am no longer eligible or move from the TRICARE Prime area.

SIGNATURE \_\_\_\_\_

RELATIONSHIP TO SPONSOR \_\_\_\_\_

DATE \_\_\_\_\_

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